ELSEVIER

Volume 42, Numbers 1–2, 30 January 1998

JOURNAL OF ELECTROANALYTICAL CHEMISTRY

Contents

Preliminary Notes

Photocatalytic ZnO films prepared by anodizing
Y. Yamaguchi, M. Yamazaki, S. Yoshihara and T. Shirakashi 1

On the calculation of surface concentration from measurements by the radiotracer 'electrode lowering' technique
D. Poškus 5

The voltammetric features associated with the lifting of charge-induced surface reconstruction on Au(100)
P. Skołuda 9

Electric field enhanced water dissociation at the bipolar membrane junction from ac impedance spectra measurements
H. Holdik, A. Alcaraz, P. Ramírez and S. Mafé 13

Regular papers

Mechanistic approach to the oxidation of phenol at a platinum/gold electrode in an acid medium
P.I. Iotov and S.V. Kalcheva 19

Electrochemistry of Ru (EDTA) coordinated to pyridine group within thermoresponsive gel films
M. Iwaku, T. Haseba, T. Tatsuma and N. Oyama 27

The electrochemical reduction of dimethyl maleate and dimethyl fumarate
A.P. Doherty and K. Scott 35

Effect of surface order on adsorption of sulfate ions on silver electrodes
S. Smoliński, P. Zelenay and J. Sobkowski 41

Substituent effect in the electrochemistry of Dawson-type tungstodiphosphates: Some strategic parameters for apparently multiple electronation on the first wave of heteropolyanions
B. Keita, A. Belhouari, L. Nadjo and R. Contant 49

Manganese-doped fullerene film electrodes
Á. Szücs, M. Tölgyesi, M. Csiszár, J.B. Nagy and M. Novák 59

Electrochemical synthesis of urea at gas-diffusion electrodes. Part II. Simultaneous reduction of carbon dioxide and nitrite ions at Cu, Ag and Au catalysts
M. Shibata, K. Yoshida and N. Furuya 67

Investigations of the interaction between $Cu_{2-x}S$ coating and Ag(I) ions using cyclic voltammetry and X-ray photoelectron spectroscopy
J. Vinkevičius, I. Možginskienė and V. Jasulaitienė 73

Surface and interfacial behaviour of 3-acetylopyridine
R. Słojkowska, A. Muszalska and M. Jurkiewicz-Herbich 83

Cation mobility in poly(ethylene oxide) solid electrolytes
M.J. Plancha, C.M. Rangel and C.A.C. Sequeira 91

Effect of electron and hole acceptors on the photoelectrochemical behaviour of nanocrystalline microporous TiO_2 electrodes
S.K. Poznyak, A.I. Kokorin and A.I. Kulak 99

Characterization of 6-mercaptopurine monolayers on Hg surfaces
J.M. Sevilla, T. Pineda, R. Madueño, A.J. Román and M. Blázquez 107

Electrochemical oxidation of nickel in alkaline solutions: a voltammetric study and modelling
A. Seghiouer, J. Chevalet, A. Barhoun and F. Lantelme 113

Formation of nickel hydrides by hydrogen evolution in alkaline media
M. Bernardini, N. Comisso, G. Davolio and G. Mengoli 125

Transport and equilibrium properties of Nafion® membranes with H^+ and Na^+ ions
T. Okada, S. Møller-Holst, O. Gorseth and S. Kjelstrup 137

Underpotential–overpotential transition of a Ag overlayer on Pt: Part 3. Influence of the rearrangement of the overlayer structure on the blocking of hydrogen upd
A. Vaskevich and E. Gileadi 147

Amalgamation effects in reverse pulse polarography at spherical electrodes. Influence on speciation measurements
J. Galceran, J. Salvador, J. Puy, F. Mas, D. Giménez and M. Esteban 151

Micromorphology changes of silicon oxide on Si(111) during current oscillations: a comparative in situ AFM and FTIR study
O. Nast, S. Rauscher, H. Jungblut and H.-J. Lewerenz 169

Polythiophene puzzle—a plausible solution
C. Visy and J. Kankare 175

Adsorption of normal hexanol on bismuth single crystal plane electrodes
E. Lust, A. Jänes, K. Lust and P. Miidla 189

Channel electrode voltammetry: the kinetics of the complexation of the chloranil radical anion with M^{2+} ions by waveshape analysis
J.A. Cooper, J.A. Alden, M. Oyama, R.G. Compton and S. Okazaki 201

Electrochemistry at boron-doped diamond films grown on graphite substrates: redox-, adsorption and deposition processes
C.H. Goeting, F. Jones, J.S. Foord, J.C. Eklund, F. Marken, R.G. Compton, P.R. Chalker and C. Johnston 207

Correlation of voltammetric and spectroscopic data obtained from open- and closed-shell aromatic esters and those obtained from AM1 calculations
R.D. Webster, A.M. Bond and D.C. Coomber 217

Mott–Schottky analysis of polycrystalline copper(I) bromide in aqueous electrolytes
P. Knauth and Y. Massiani 229

Clay-modified electrodes as studied by the quartz crystal microbalance: adsorption of ruthenium complexes
K. Yao, K. Shimazu, M. Nakata and A. Yamagishi 235

Author index 243

Subject index 245

The table of contents of the Journal of Electroanalytical Chemistry is included in ESTOC – Elsevier Science Tables of Contents services – which can be accessed on the World Wide Web at the following URLs:
http://www.elsevier.nl/locate/estoc or http://www.elsevier.com/locate/estoc

US mailing notice—*The journal of Electroanalytical Chemistry* (ISSN 0022-0728) is published three weekly by Elsevier Science S.A. (P.O. Box 564, CH-1001 Lausanne). Annual subscription price in the USA is US$ 5069.00 (valid in North, Central and South America), including air speed delivery. Application to mail at second class postage rate is pending at Jamaica, NY 11431.
USA POSTMASTERS: Send address changes to the *Journal of Electroanalytical Chemistry*. Publications Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003.
AIRFREIGHT AND MAILING in the USA by Publication Expediting, Inc., 200 Meacham Avenue, Elmont, NY 11003.
Advertising information: Advertising orders and enquiries may be sent to: **International:** Elsevier Science, Advertising Department, The Boulevard, Langford Lane, Kidlington, Oxford OX5 1GB, UK, Tel: +44 1865 843565; fax: +44 1865 843976. **USA and Canada:** Weston Media Associates, Daniel Lipner, P.O. Box 1110, Greens Farms, CT 06436-1110, USA, Tel: +1 203 261 2500; fax: +1 203 261 0101. **Japan:** Elsevier Science Japan, Marketing Services, 1-9-15 Higashi-Azabu, Minato-ku, Tokyo 106, Japan, Tel: +81 3 5561 5033, fax: +81 3 5561 5047.